Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A pharmaceutical composition comprising a minibrain homologous protein or/and a functional fragment thereof, a nucleic acid molecule encoding a minibrain homologous protein or/and a functional fragment thereof or/and a modulator/effector of said nucleic acid molecule or/and said protein together with pharmaceutically acceptable carriers, diluents or/and additives.

2. (Original) The composition of claim 1, wherein the nucleic acid molecule is a vertebrate or insect minibrain nucleic acid, particulary encoding a human protein as described in Table 1, or/and a nucleic molecule which is complementary thereto or a functional fragment thereof or a variant thereof.

3. (Previously Presented) The composition of claim 1, wherein said nucleic acid molecule is selected from the group consisting of

   (a) a nucleic acid molecule encoding a polypeptide as shown in Table 1, or an isoform, fragment or variant of said polypeptide;

   (b) a nucleic acid molecule which comprises or is the nucleic acid molecule as shown in Table 1;

   (c) a nucleic acid molecule being degenerated as a result of the

genetic code to the nucleic acid sequences as defined in (a) or (b);

(d) a nucleic acid molecule that hybridizes at 50°C in a solution containing 1 x SSC and 0.1 % SDS to a nucleic acid molecule as defined in claim 2 or as defined in (a) to (c) or/and a nucleic acid molecule which is complementary thereto;

(e) a nucleic acid molecule that encodes a polypeptide which is at least 85%, preferably at least 90%, more preferably at least 95%, more preferably at least 98% and up to 99,6% identical to the human protein as described in Table 1 or as defined in claim 2 or to a polypeptide as defined in (a);

(f) a nucleic acid molecule that differs from the nucleic acid molecule of (a) to (e) by mutation and wherein said mutation causes an alteration, deletion, duplication or premature stop in the encoded polypeptide.

4. (Previously Presented) The composition of claim 1, wherein the nucleic acid molecule is a DNA molecule, particularly a cDNA or a genomic DNA.

5. (Previously Presented) The composition of claim 1, wherein said nucleic acid encodes a polypeptide contributing to regulating the energy homeostasis or/and the metabolism of triglycerides.

6. (Previously Presented) The composition of claim 1, wherein said nucleic acid molecule is a recombinant nucleic acid molecule.

7. (Previously Presented) The composition of claim 1, wherein the nucleic acid molecule is a vector, particularly an expression vector.

8. (Previously Presented) The composition of claim 1, wherein the polypeptide is a recombinant polypeptide.

9. (Original) The composition of claim 8, wherein said recombinant polypeptide is a fusion polypeptide.

10. (Previously Presented) The composition of claim 1, wherein said nucleic acid molecule is selected from hybridization probes, primers and anti-sense oligonucleotides.

11. (Previously Presented) The composition of claim 1 which is a diagnostic composition.

12. (Previously Presented) The composition of claim 1 which is a therapeutic composition.

13. (Previously Presented) The composition of claim 1 for the manufacture of an agent for detecting or/and verifying, for the

treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including metabolic syndrome, obesity, or/and diabetes, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis, in cells, cell masses, organs or/and subjects.

14. (Previously Presented) The composition of claim 1 for application in vivo.

15. (Previously Presented) The composition of claim 1 for application in vitro.

16. (Cancelled)

17. (Cancelled)

18. (Original) A non-human transgenic animal exhibiting a modified expression of a minibrain homologous polypeptide, particularly of a polypeptide according to claim 3.

19. (Previously Presented) The animal of claim 18, wherein the expression of the minibrain homologous polypeptide, is increased or/and reduced.

20. (Original) A recombinant host cell exhibiting a modified expression of a minibrain homologous polypeptide, particularly of a polypeptide according to claim 3.

21. (Original) The cell of claim 20 which is a human cell.

22. (Original) A method of identifying a (poly)peptide involved in the regulation of energy homeostasis or/and metabolism of triglycerides in a mammal comprising the steps of

(a) contacting a collection of (poly)peptides with a minibrain homologous polypeptide, particularly a polypeptide according to claim 3, or a functional fragment thereof under conditions that allow binding of said (poly)peptides;

(b) removing (poly)peptides which do not bind and

(b) identifying (poly)peptides that bind to said minibrain homologous polypeptide.

23. (Original) A method of screening for an agent which modulates/effects the interaction of a minibrain homologous polypeptide, particularly of a polypeptide according to claim 3, with a binding target, comprising the steps of

(a) incubating a mixture comprising

(aa) a minibrain homologous polypeptide, particularly a

polypeptide according to claim 3, or a functional fragment thereof;

(ab) a binding target/agent of said polypeptide or functional fragment thereof; and

(ac) a candidate agent

under conditions whereby said polypeptide or functional fragment thereof specifically binds to said binding target/agent at a reference affinity;

(b) detecting the binding affinity of said polypeptide or functional fragment thereof to said binding target to determine an affinity for the agent; and

(c) determining a difference between affinity for the agent and the reference affinity.

24. (Original) A method for screening for an agent, which modulates/effects the activity of a minibrain homologous polypeptide, particularly of a polypeptide according to claim 3, comprising the steps of

(a) incubating a mixture comprising

(aa) said polypeptide or a functional fragment thereof;

(ab) a candidate agent

under conditions whereby said polypeptide or functional fragment thereof has a reference activity;

(b) detecting the activity of said polypeptide or functional

fragment thereof to determine an activity in presence of the agent; and

(c) determining a difference between the activity in the presence of the agent and the reference activity.

25. (Previously Presented) A method of producing a composition comprising mixing a (poly)peptide identified by the method of claim 22 with a pharmaceutically acceptable carrier, diluent or/and additive.

26. (Original) The method of claim 25 wherein said composition is a pharmaceutical composition for preventing, alleviating or treating of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Original) Kit comprising at least one of

(a) a minibrain homologous nucleic acid molecule or a functional fragment thereof;

(b) a minibrain homologous amino acid molecule or a functional fragment or an isoform thereof;

(c) a vector comprising the nucleic acid of (a);

(d) a host cell comprising the nucleic acid of (a) or the vector of (c);

(e) a polypeptide encoded by the nucleic acid of (a);

(f) a fusion polypeptide encoded by the nucleic acid of (a);

(g) an antibody, an aptamer or/and another modulator/effector of the nucleic acid of (a) or/and the polypeptide of (b), (e), or/and (f) and

(g) an anti-sense oligonucleotide of the nucleic acid of (a).

34. (Previously Presented) A method of producing a composition comprising mixing an agent identified by the method of claim 23 with a pharmaceutically acceptable carrier, diluent or/and additive.

35. (Cancelled)

36. (New) Use of for the treatment of obesity, diabetes, or/and metabolic syndrome for controlling the function of a gene or/and a gene product which is influenced or/and modified by a minibrain homologous polypeptide in a patient in need of treatment, comprising administering to the patient an effective amount of a nucleic acid molecule encoding a minibrain homologous protein or an isoform, a functional fragment or variant thereof, in particular a nucleic acid molecule as described in Table 1, particularly of a nucleic acid molecule according to claim 3 (a), .(b), or (c), or/and a polypeptide encoded thereby or/and a functional fragment or/and a variant of said nucleic acid molecule or said polypeptide or/and a modulator/effector of said nucleic acid molecule or polypeptide.

37. (New) A method of identifying substances capable of interacting with a minibrain homologous polypeptide, particularly with a polypeptide according to claim 3, comprising using a nucleic acid molecule encoding a minibrain homologous protein or an isoform, a functional fragment or variant thereof, in particular a nucleic acid molecule as described in Table 1, particularly of a nucleic acid molecule according to claim 3 (a), (b), or (c), or/and a polypeptide encoded thereby or/and a functional fragment or/and a variant of said nucleic acid molecule or said polypeptide or/and a

modulator/effector of said nucleic acid molecule or said polypeptide.

38. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease,hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis in a patient in need thereof, comprising administering to the patient an effective amount of a (poly)peptide as identified by the method of claim 22

39. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis in a patient in need thereof, comprising administering to the patient an effective amount of a nucleic acid molecule as defined in claim 1.

40. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease,

hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis in a patient in need thereof, comprising administering to the patient an effective amount of a polypeptide as defined in claim 1.

41. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis in a patient in need thereof, comprising administering to the patient an effective amount of a vector as defined in claim 7.

42. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis in a patient in need thereof, comprising administering to the patient an effective amount of a host cell as defined in claim 20.

43. (New) A method for the production of a non-human transgenic animal which over- or under-expresses the minibrain homologous gene product, comprising using a minibrain homologous nucleic acid molecule or of a functional fragment thereof.

44. (New) A method for the treatment, alleviation or/and prevention of metabolic diseases or dysfunctions, including obesity, diabetes, or/and metabolic syndrome, as well as related disorders such as eating disorder, cachexia, hypertension, coronary heart disease, hypercholesterolemia, dyslipidemia, osteoarthritis, gallstones, or liver fibrosis, in a patient in need thereof, comprising administering to the patent an effective amount of an agent as identified by the method of claim 23.